

Topic: Interactions

1. Photon gamma rays strike an object and scattered radiation results. The production of scattered radiation likely results from: ?

- A. Compton effects
- B. Bremsstrahlung effects
- C. Characteristic effects
- D. Photoelectric effects

Answer:

A. Gamma rays predominate with MV energies. MV scattering effects tend to be Compton. When a gamma ray photon knocks a stationary electron, some of the incoming photon's energy is transferred to the scattered electron with the balance of energy left to the degraded photon.

Topic: Delivery

2. The half life of Palladium 103; Pd-103, is 17 days. Pd-103 brachytherapy seeds are typically used for: ?

- A. Intrauterine HDR
- B. Prostate HDR
- C. Prostate LDR
- D. Intrauterine LDR

Answer:

C. Palladium 103 seeds are generally used for LDR (Low Dose Rate) prostate implants.

Topic: Physics

3. The International units, SI given for the measurement of radioactivity are: ?

- A. Coulombs
- B. Grays
- C. Sieverts
- D. Becquerels

Answer:

D. Radioactivity is measured in disintegrations per second, in SI units known as Becquerel. One Becquerel is: a disintegration, per second.